

Serial No.: 09/903,904
Group Art Unit: 2173

AMENDMENTS TO CLAIMS

• Please amend pending claims 10, 17, 18, and 19, as indicated below. A complete listing of all claims and their status in the application are as follows:

1. (previously presented) A data input method for use with a computer system for user data input to the computer system, comprising the steps of:

(1) predefining a set of combinations of hand digit movements, each combination of hand digit movements representing a specific character;

(2) predefining a character mapping table which maps each combination of hand digit movements predefined in said step (1) to a specific character;

(3) sensing user's wrist muscle movements due to the user's hand digit movements representing a character intended for input to the computer system, and thereby producing a corresponding data signal;

(4) transmitting the data signal to the computer system; and

(5) searching through the character mapping table to find the character corresponding to the data signal.

2. (original) The method of claim 1, wherein in said step (1), the user's wrist muscle movements are sensed by a data input device coupled to the user's wrist.

3. (original) The method of claim 2, wherein the data input device comprises a piezoelectric element, a signal conversion unit, a signal processing unit.

4. (original) The method of claim 3, wherein the piezoelectric element is attached to the user's wrist to sense the wrist's muscle movements due to the user's hand digit movements representing a keyboard character intended for input to the computer system to thereby produce a corresponding electrical signal.

5. (original) The method of claim 3, wherein the signal conversion unit is coupled to the piezoelectric element to convert the output signal of the piezoelectric element into a data signal.

6. (original) The method of claim 5, wherein the data signal is a digital signal.

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7. (original) The method of claim 5, wherein the data signal is an analog signal.
8. (original) The method of claim 3, wherein the signal processing unit is coupled to the signal conversion unit and is capable of modulating the data signal into transmittable form for transmission to the computer system.
9. (original) The method of claim 1, further comprising the step of:
displaying the data corresponding to the received data signal on a monitor screen.
10. (currently amended) A data input method for use to input data to a computer system, comprising the steps of:
(1) predefining a set of combinations of hand movements, each combination of hand digit movements representing a specific character;
(2) predefining a character mapping table which maps each combination of hand digit movements predefined in said step (1) to the specific character;
(4)-(3) coupling a sensing device to user's wrist, the sensing device capable of sensing wrist's muscle movements due to hand digit-bending movements within a certain range of angle for representing a-the specific character to thereby produce a corresponding electrical signal;
(2)-(4) converting the electrical signal into a corresponding data signal;
(3)-(5) transmitting the data signal to the computer system;
(4)-(6) activating the computer system to search through a-the character mapping table to find the data-character corresponding to the data signal; and
(5)-(7) displaying the data-character corresponding to the data signal on a monitor screen.
11. (original) The method of claim 10, wherein the sensing device comprises a piezoelectric element, a signal conversion unit, a signal processing unit.
12. (original) The method of claim 11, wherein the piezoelectric element is attached to the user's wrist to sense the wrist's muscle movements due to the user's hand digit movements representing a keyboard character intended for input to the computer system to thereby produce a corresponding electrical signal.

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13. (original) The method of claim 11, wherein the signal conversion unit is coupled to the piezoelectric element to convert the output signal of the piezoelectric element into a data signal.
14. (original) The method of claim 13, wherein the data signal is a digital signal.
15. (original) The method of claim 13, wherein the data signal is an analog signal.
16. (original) The method of claim 11, wherein the signal processing unit is coupled to the signal conversion unit and is capable of modulating the data signal into transmittable form for transmission to the computer system.
17. (currently amended) A data input method for use with a sensing device including a piezoelectric element, a memory unit, a signal conversion unit, and a signal processing unit, to input data to a computer system, comprising the steps of:
- (1) predefining a set of combinations of hand digit movements, each combination of hand digit movements representing a keyboard character;
 - (2) predefining a character mapping table which maps each combination of hand digit movements predefined in said step (1) to the keyboard character and storing the character mapping table in the memory unit;
 - ~~(1)-(3)~~ coupling the sensing device to user's wrist, the sensing device capable of sensing wrist's muscle movements to thereby produce a corresponding electrical signal;
 - ~~(2)-(4)~~ activating the piezoelectric element to sense the user's wrist muscle movements due to the user's hand digit-bending movements within a certain range of angle for representing a keyboard character intended for input to the computer system, whereby the piezoelectric element produces a corresponding electrical signal;
 - ~~(3)-(5)~~ activating the signal conversion unit to convert the electrical signal into a data signal;
 - ~~(4)-(6)~~ activating the signal processing unit to modulate the data signal for transmission to the computer system;
 - ~~(5)-(7)~~ activating the computer system to search through a character mapping table to find the data-keyboard character corresponding to the data signal; and
 - ~~(6)-(8)~~ displaying the data-keyboard character corresponding to the data signal on a monitor screen.

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18. (currently amended) A data input device for use to input data to a computer system, the data input device comprising:

a piezoelectric element coupled to user's wrist and capable of sensing ~~wrist's muscle~~ a combination of predefined hand digit movements which are mapped to a computer code by a mapping table to thereby produce a corresponding electrical signal representing ~~a the~~ computer code intended for input to the computer system;

a signal conversion unit coupled to the piezoelectric element and capable of converting the electrical signal from the piezoelectric element into a data signal; and

a signal processing unit coupled to the signal conversion unit and capable of modulating the data signal for transmission to the computer system, whereby the computer code corresponding to the data signal is obtained.

19. (currently amended) A data input device for use to input data to a computer system, the data input device comprising:

a piezoelectric element coupled to user's wrist and capable of sensing wrist's muscle movements due to a combination of hand digit-bending movements within a certain range of angle ~~for representing a specific character~~ to thereby produce a corresponding electrical signal representing ~~a the~~ computer code intended for input to the computer system, wherein the combination of hand digit-bending movements are predefined and mapped to a computer code by a mapping table;

a signal conversion unit coupled to the piezoelectric element and capable of converting the electrical signal from the piezoelectric element into a data signal;

a signal processing unit coupled to the signal conversion unit and capable of modulating the data signal for transmission to the computer system; and

mapping means provided in the computer system, which is capable of finding the computer code corresponding to the data signal from the signal processing unit according to the mapping table.